

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for producing a transgenic sugar beet plant, which comprises:

- a) transforming at least one sugar beet cell with at least two transgenes, with the first transgene encoding a vacuolar pyrophosphatase (V-PPase) and the second transgene encoding at least one of a cytosolic ~~and/or~~ and a nucleus-located soluble pyrophosphatase (C-PPase),
- b) culturing and regenerating the transformed cells under conditions which lead to the complete regeneration of the transgenic beet plant, and
- c) obtaining a transgenic beet plant having at least one of an increased sucrose content in the beet, an increased ~~and/or extended~~ meristem activity, an extended meristem activity ~~and/or~~ and a reduced rate of sucrose breakdown during storage.

2. (Currently Amended) The process as claimed in claim 1, wherein the first transgene comprises a nucleic acid sequence which is selected from the group of ~~the~~ nucleotide sequences consisting of

- a) a nucleotide sequence depicted in SEQ ID No. 4, or a sequence which is complementary thereto,
- b) a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 5, or a sequence which is complementary thereto, and
- c) a nucleotide sequence which exhibits a sequence identity of more than 80% with the sequence according to a) or b).

3. (Currently Amended) The process as claimed in claim 1 ~~or 2~~, wherein the second transgene comprises a nucleic acid sequence which is selected from the group of ~~the~~ nucleotide sequences consisting of

- a) a nucleotide sequence depicted in SEQ ID No. 1, or a sequence which is complementary thereto,
- b) a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 2, or a sequence which is complementary thereto, and
- c) a nucleotide sequence which exhibits a sequence identity of more than 80% with the sequence according to a) or b).

4. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein at least one of the first and/or and the second transgene is arranged on a vector.

5. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the vector is equipped for overexpressing at least one of the first and/or and the second transgene.

6. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein at least one of the first and/or and the second transgene ~~is/are~~ is operatively linked, on the vector, to a promoter.

7. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the promoter is a tissue-specific promoter, a constitutive promoter, an inducible promoter or a combination thereof.

8. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the promoter is a promoter from *Beta vulgaris*, *Arabidopsis thaliana* or the cauliflower mosaic virus.

9. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the promoter is the CaMV35S promoter.

10. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the promoter is a *Beta vulgaris* V-PPase promoter.

11. (Currently Amended) The process as claimed in ~~the preceding~~ claim 10, wherein the promoter comprises a nucleotide sequence which is selected from the group of nucleotide sequences consisting of

- a) a nucleotide sequence as depicted in SEQ ID No. 6 or 7, or a sequence which is complementary thereto, and
- b) a nucleotide sequence which exhibits a sequence identity of more than 80% with one of the sequences as depicted in SEQ ID No. 6 or 7.

12. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the promoter is ~~the~~ a sucrose synthase promoter.

13. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the promoter is a storage-specific promoter.

14. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the vector possesses intran enhancers or other regulatory elements.

15. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the first and second transgenes are arranged together on a single vector.

16. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the first and second transgenes are arranged on different vectors.

17. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the first and second transgenes are transformed simultaneously.

18. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding claims~~, wherein the transformation is at least one of a biolistic transformation, an electrotransformation, an agrobacterium-mediated transformation ~~and/or~~ and a virus-mediated transformation.

19. (Currently Amended) A transgenic, ~~preferably fertile,~~ plant containing at least one transformed cell, said plant which can be obtained using a process as claimed in claim 1 one of the preceding claims.

20. (Currently Amended) The transgenic plant as claimed in ~~the preceding claim 19,~~ which exhibits an increased content of sucrose in comparison to a corresponding non-transgenic plant.

21. (Currently Amended) The transgenic plant as claimed in claim 19 one of the preceding claims, which exhibits an increase in meristem activity during growth in comparison to a corresponding non-transgenic plant.

22. (Currently Amended) The transgenic plant as claimed in claim 19 one of the preceding claims, which exhibits a decreased rate of sucrose breakdown during storage in comparison to a corresponding non-transgenic plant.

23. (Currently Amended) A harvesting or propagation material from a transgenic plant as claimed in claim 19 one of the preceding claims.

24. (Currently Amended) A nucleic acid molecule encoding a protein having the biological activity of a *Beta vulgaris* soluble pyrophosphatase, ~~in particular a C-PPase,~~ with the sequence of the nucleic acid molecule being selected from the group of ~~the~~ nucleotide sequences consisting of:

- a) a nucleotide sequence depicted in SEQ ID No. 1, or a sequence which is complementary thereto,
- b) a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 2, or a sequence which is complementary thereto, and
- c) a nucleotide sequence which exhibits a sequence identity of more than 80% with the sequence according to a) or b).

25. (Currently Amended) A nucleic acid molecule encoding a promoter of a *Beta vulgaris* vacuolar pyrophosphatase (V-PPase), with the sequence of the nucleic acid molecule being selected from the group of nucleotide sequences consisting of

- a) a nucleotide sequence as depicted in SEQ ID No. 6 or 7, or a sequence which is complementary thereto, and
- b) a nucleotide sequence which exhibits a sequence identity of more than 80% with one of the sequences as depicted in SEQ ID No. 6 or 7.

26. (Currently Amended) A method ~~The use of the nucleic acid molecule as claimed in claim 24~~ for producing a transgenic plant which contains at least one transformed cell, said method comprising producing said plant with the use of the nucleic acid molecule as claimed in claim 24.

27. (Currently Amended) A vector which contains the sequence of the nucleic acid molecule as claimed in claim 24 ~~and/or 25~~.

28. (Original) The vector as claimed in claim 27, which is a viral vector or a plasmid.

29. (Currently Amended) A method ~~The use of the vector as claimed in claim 27 or 28~~ for producing a transgenic plant which contains at least one transformed cell, said method comprising producing said plant with the use of the vector claimed in claim 27.

30. (Currently Amended) A host cell which is transformed with a vector as claimed in claim 27 ~~or 28~~.

31. (Original) The host cell as claimed in claim 30, which is a bacterial cell, plant cell or animal cell.